

U.S. Patent Application Serial No. 10/607,514
Amendment dated April 23, 2007
Response to Official Action dated January 23, 2007

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REMARKS

The Official Action dated January 23, 2007 has been carefully considered. It is believed that the present Amendment places the present application in condition for allowance. Reconsideration is respectfully requested.

By the present Amendment, claims 36 and 37 have been amended to include the limitations of claims 29 and therefore stand in independent form. Additionally, claim 37 has been amended to include limitations from claim 33. Claim 53 has been added, support for which may be found in the specification at page 14, line 11-page 15, line 2. As these amendments do not involve any introduction of new matter, entry is believed to be in order and is respectfully requested.

In the Official Action, claims 29-32 and 39-48 were rejected under 35 U.S.C. §112, first paragraph. The Examiner asserted that while the specification is enabling for a radiation cured encapsulating material having the claimed critical properties and formed from a composition as described in Examples 1 and 2, the specification does not reasonably provide enablement for a radiation cured encapsulating material having the claimed critical properties and being formed from a composition comprising from about 30 to about 80 weight % of polyethyl-based urethane acrylate oligomer, from about 1 to 40 weight % of isocyanurate monomer, and an effective amount of a photoinitiator for radiation curing. Specifically, the Examiner asserted that the specification is not enabling for a composition wherein the urethane acrylate is present in amounts of about 30 weight % nor wherein the isocyanurate monomer is present in amounts of about 1 weight %. The Examiner asserted there is no evidence of record that a composition within the broadly claimed range would result in a cured encapsulating material with the properties of claim 29.

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Initially, Applicants note that claims 41-43 were previously cancelled in this application. Accordingly, this rejection is traversed with respect to pending claims 29-32, 39, 40 and 44-48, and reconsideration is respectfully requested.

As a matter of Patent Office practice, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirement of the first paragraph of §112 *unless* there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support, *In re Marzocchi*, 169 U.S.P.Q. 367, 369 (C.C.P.A. 1971) (emphasis by Court). In any event, it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement, *In re Marzocchi*, *supra*, at 370 (emphasis by Court). The present specification contains a teaching of the manner and process of making and using radiation cured encapsulating materials corresponding in scope to the claimed subject matter. See, for example, the specification at page 8, lines 5-15, page 11, lines 8-15, page 12, lines 6-12 and page 14, line 11-page 15, line 2. Moreover, the Examiner has not provided any explanation as to why the truth or accuracy of the statements set forth in the present specification and relied upon for enablement are doubted, nor has the Examiner backed any assertion made in the Official Action related to the lack of enablement with acceptable evidence or reasoning which is inconsistent with the statements set forth in the present specification. Accordingly, the present specification must be taken as in compliance with the enabling requirement of the first paragraph of §112 according to *Marzocchi*.

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Finally, despite the Examiner's position that the specification is not enabling for a composition wherein the urethane acrylate is present in amounts of about 30 weight % nor is it enabling for a composition wherein the isocyanurate monomer is present in amounts of about 1 weight %, it appears that the Examiner concedes that the specification is enabling for a radiation cured encapsulating material formed by radiation curing and composition comprising from about 30 to about 80 weight % of a polyether-based urethane acrylate oligomer, from about 1 to about 40 weight % of a isocyanurate monomer having a plurality of acrylate or methacrylate groups, and an effective amount of a photoinitiator for radiation curing a composition upon exposure to curing radiation, in view of the Examiner's failure to include claim 33 in the present rejection.

Accordingly, it is believed that claims 29-32, 39, 40 and 44-48 are fully enabled by the present specification in accordance with the requirements of 35 U.S.C. §112, first paragraph, whereby the rejection has been overcome. Reconsideration is respectfully requested.

Claims 29-50 were rejected under 35 U.S.C. §103(a) as unpatentable over the Szum U.S. Patent No. 6,240,230. The Examiner asserted that Szum sets forth compositions that are "substantially the same" as that contemplated by Applicants' claims, whereby the Examiner has reason to believe that compositions taught by Szum necessarily result in the claimed tear resistance, adhesion force, modulus and elongation at break. The Examiner cited *In re Spada*, 911 F.2d 705, 709, 15 U.S.P.Q. 2d 1655, 1658 (Fed. Cir. 1990) for the proposition that if the prior art teaches the identical chemical structure, the properties which applicants disclose and/or claim are necessarily present. Additionally, the Examiner cited *In re Dillion*, 16 U.S.P.Q. 2d 1897, for the proposition that a prima facie case for obviousness of chemical compositions is established if there is a structural similarity between claimed and prior art subject matter.

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Again, Applicants note that claims 41-43 have been cancelled. With respect to pending claims 29-40 and 44-50, this rejection is traversed and reconsideration is respectfully requested. Applicants submit that the radiation cured encapsulating materials as defined by pending claims 29-40 and 44-50 are not rendered obvious over Szum.

More particularly, independent claims 29, 36 and 37 each recite a radiation cured encapsulating material having a tear resistance of less than about 2.20 pounds force, an adhesion force to an underlying surface material of greater than about 0.0044 pounds force and a Young's modulus at 25°C of from about 3000 to about 15,000 psi. Claims 36 and 37 further define compositional components of the claimed materials. The materials of the invention provide a good balance of competing properties so that the materials exhibit good adhesion but can be torn in a predictable manner, facilitating their reliable use in the field.

Szum broadly discloses radiation curable compositions comprising 20 weight percent to about 80 weight percent of at least one urethane acrylate oligomer, about 20 weight percent to about 80 weight percent of at least one monomer diluent, and an effective amount of at least one photoinitiator. Szum specifically discloses that mechanical properties of the compositions and materials are effected by the selection of oligomer and by selection of reactive or monomer diluent (column 7, lines 1-3).

However, Szum provides no teaching or suggestion as to the tear resistance, adhesion force to an underlying surface material, or modulus required by claims 29, 36 and 37.

Particularly, Applicants find no teaching by Szum relating to either tear resistance or adhesion force, and the modulus of the compositions taught by Szum is significantly distinguishable from that required by claim 29. While Szum discloses at column 7, lines 64-67 that rubbery modulus values can be at least 8 MPa and preferably greater than about 15 MPa and more preferably greater than about 25 MPa, corresponding to 1160, 2175 and 3625 psi, one of ordinary skill in the art will recognize that the rubbery modulus is not the Young's

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modulus, which is a tensile modulus, as recited in claims 29, 36 and 37. The only teaching which Applicants find by Szum relating to a tensile modulus is in Examples 1 and 3 wherein the exemplary compositions are disclosed as exhibiting a tensile modulus of 973 MPa and 740 MPa, corresponding to 140,000 psi and 107,000 psi, respectively. Similarly, at column 13, line 66, reference is merely made to a coating having a modulus less than about 2,000 psi. Again, Applicants find no teaching or suggestion by Szum relating to a Young's (tensile) modulus in the range of from 3,000 to 15,000 psi as required by claims 29, 36 and 37. Thus, Szum fails to disclose materials exhibiting the combination of properties required by claims 29, 36 and 37, including a Young's modulus of from about 3,000 to about 15,000 psi, and in fact discloses materials having a significantly different tensile modulus as compared with that required by claims 29, 36 and 37.

The Examiner has cited *In re Spada, supra.*, for the proposition that if the prior art teaches the identical chemical structure, the properties which applicants disclose and/or claim are necessarily present. Applicants do not disagree with this holding of *Spada*. However, in *Spada*, the Court reviewed a rejection under 35 U.S.C. §102 and stated that when the claimed compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art, *In re Spada*, 15 U.S.P.Q. 2d at 1658. On the other hand, the Examiner has rejected claims 29-40 and 44-50 as obvious under 35 U.S.C. §103, apparently acknowledging that Szum fails to specifically disclose a composition along the lines of those exemplified in the present application, or otherwise exhibiting a tear resistance, an adhesion force and a Young's modulus as recited in claims 29, 36 and 37. Accordingly, Szum does not specifically disclose a composition identical to any composition set forth in the present application and disclosed as exhibiting the combination of properties presently claimed. In view of the failure of Szum to more specifically disclose a composition along the lines of those exemplified in the present

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application as exhibiting a tear resistance, an adhesion force and a Young's modulus as recited in claims 29, 36 and 37, Szum does not disclose a composition which the Examiner may assert inherently exhibits the combination of properties presently claimed.

To the contrary, as discussed above, the exemplary teachings of Szum disclose compositions which are significantly distinguishable in terms of at least Young's modulus from those exemplified in the present application. While the teachings of a reference are not limited to examples, any assertion of inherency must surely be limited to the examples, as the broad teachings of Szum cannot support any rejection based on inherency under 35 U.S.C. §103. That is, inherency and obviousness are entirely different concepts, *In re Rinehart*, 189 U.S.P.Q. 143 (C.C.P.A. 1976), and a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements to result in the claimed combination, *In re Newell*, 13 U.S.P.Q. 2d 1248 (Fed. Cir. 1989). Moreover, while independent claims 29, 36 and 37 are not limited to the compositions of examples 1 and 2 set forth in the present specification, Applicants have presented these examples as exemplary of materials exhibiting the properties recited in claims 29, 36 and 37 and the failure of Szum to teach such compositions demonstrates the failure of Szum to inherently disclose compositions exhibiting the combination of properties required by present claims 29, 36 and 37.

The Examiner also relies on *In re Dillion* for the proposition that a *prima facie* case for obviousness of chemical compositions is established if there is a structural similarity between claimed and prior art subject matter. The Examiner's reliance on *Dillion* appears to overlook the fact that the principle difference between the claimed and prior art compositions in *Dillion* was the difference between chemical compounds, *viz.*, tri-orthoesters and tetra-orthoesters. The Court specifically noted that it did not intend to imply that in all cases involving claimed compositions, structural obviousness between involved chemical

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compounds necessarily makes the claimed composition *prima facie* obvious. See, specifically, 16 U.S.P.Q. 2d 1901, note 3. Unlike *Dillion*, the presently claimed compositions do not principally differ from Szum based on a difference between chemical compounds. More importantly, unlike *Dillion*, the present independent claims 29, 36 and 37 specifically recite a combination of properties which is neither taught nor suggested by Szum and in at least one important respect, namely Young's modulus, is significantly different from the specific modulus properties exemplified by Szum. Accordingly, the Examiner's reliance on *Dillion* is inappropriate in the present context.

Further, the fact that a claimed invention may be encompassed by a disclosed generic formula does not by itself render that invention obvious, *In re Baird*, 16 F.3d 380, 382, 29 U.S.P.Q. 1550 (Fed. Cir. 1994), citing *In re Jones*, 958 F.2d 347, 350, 21 U.S.P.Q. 2d 1941, 1943 (Fed. Cir. 1992). In this regard, in order to render a claimed invention obvious, the prior art must enable one skilled in the art to make and use the claimed invention, *Motorola, Inc. v. InterDigital Tech. Corp.*, 43 U.S.P.Q.2d 1481, 1489 (Fed. Cir. 1997). As noted above, Szum fails to provide any teaching of a material exhibiting the combination of properties recited in claims 29, 36 and 37. In fact, Szum fails to provide any specific teaching or suggestion of a combination of components which provides a cured material exhibiting the combination of properties recited in claims 29, 36 and 37. To the contrary, Szum's specific exemplary compositions teach away from cured materials having a combination of properties as recited in claims 29, 36 and 37, and particularly having a Young's modulus as claimed. In view of these deficiencies in the teachings, Szum does not enable one skilled in the art to make and use a radiation cured encapsulating material having the combination of properties required by claims 29, 36 and 37. Thus, Szum does not render the presently claimed materials obvious under 35 U.S.C. §103.

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While the broad teachings of Szum may recite components which are suitable for use in the presently claimed materials, Szum provides no teaching or suggestion relating to materials exhibiting the combination of properties recited in independent claims 29, 36 and 37, or for combining the various components therein to arrive at such materials. Rather, Szum discloses the specific combination of such components in a manner which results in materials having at least one significantly distinguishable property, namely, Young's modulus. As an analogy, components such as water, flour, eggs, sugar and oil may be combined in various manners to provide breads, cakes, cookies, pancakes and the like, all of which do not inherently exhibit the same properties, despite having overlapping components. In the same manner, the general teachings of Szum do not lead one of ordinary skill in the art to arrive at materials inherently exhibiting the claimed combination of properties or otherwise suggest how to achieve such a combination of properties. Accordingly, Szum does not render the presently claimed materials obvious under 35 U.S.C. §103.

It is therefore submitted that the claimed radiation cured encapsulating materials are neither anticipated by nor rendered obvious over Szum, whereby the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

It is believed that the above represents a complete response to the rejections set forth in the Official Action, and places the present application in condition for allowance. Reconsideration and an early allowance are requested.

Respectfully submitted,


Holly D. Kozlowski, Reg. No. 30,468
DINSMORE & SHOHL LLP
1900 Chemed Center
255 E. Fifth Street
Cincinnati, Ohio 45202
(513) 977-8568

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